Delavan (D, B,)

ERYSIPELAS

OF THE

LARYNX AND PHARYNX.

BY

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NEW YORK.

(Read before the American Laryngological Association, June 24, 1885.)

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ERYSIPELAS OF THE LARYNX AND PHARYNX.*

By D. BRYSON DELAVAN, M. D.

SINCE the remarkable and exhaustive thesis of Cornil, which appeared in the "Archives générales de médecine" in 1862, little new knowledge has been advanced, either in the pathology, the clinical features, or the treatment of this affection. Morell Mackenzie, in his excellent *résumé* of the subject, tells us that erysipelas of the mucous membrane of the pharynx and larynx is, pathologically, similar to the same malady when situated on the skin, and that it occurs either primarily or by extension from the face along the mucous tracts of the mouth, nose, or ear. Its causes are the same as those which give rise to it when situated upon the external parts of the body, although it has been most often observed in the course of general epidemics of the disease. Of eighteen patients seen, in whom the pharynx was affected, fifteen were under the age of thirty, and two thirds were females. Again, on inspecting the pharynx, the appearance of the mucous membrane when affected with erysipelas differs considerably according to the form of the disease which is present; the local phenomena are generally very different from those of tonsillitis, but sometimes can not be distinguished from those of simple inflammation of the part. Cornil makes three divisions of the malady, viz.: (1) erysipelas with simple redness; (2) erysipelas with phlyctænulæ; and (3) erysipelas terminating in gangrene. Erysipelas most commonly reaches the larynx from the pharynx, but the former organ may be primarily affected while the pharynx remains healthy. According to one author, quoted by Mackenzie, the disease may extend still farther down the respiratory

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tract. In cases which come under the first division the diagnosis must remain doubtful except where the throat lesion is accompanied by manifestations upon the skin.

As to the prognosis, the dictum of Hippocrates—namely, "When erysipelas extends from within outward it is a favorable symptom, but when it removes to the internal surfaces it is a deadly one"—has been confirmed by modern observation. In nine cases analyzed by Cornil where the face was first attacked, seven deaths occurred; whereas, in nine other instances where the enanthem preceded the skin eruption, seven recoveries took place. Mackenzie states that he has seen but four cases in the whole course of his practice.

From the foregoing statements it would appear that the disease in question has been so long ago recognized, and its nature so well understood, as to render its introduction at the present time unnecessary. In searching for the records of authentic cases in available American literature, however, we are surprised to find but a single instance in which the disease has been described, namely, the one reported last year by Dr. T. A. De Blois. The case reported by Dr. William Porter, of St. Louis, was that of an Englishman whom Dr. Porter attended while residing in London. Whether it is more rare in this country than in Europe, or whether, on the other hand, it is either allowed to pass unrecognized or else regarded as a simple and ordinary complication of the general affection unworthy of special mention, it is impossible to say. That the condition is an important one no one will question, while the very general nature of the treatment suggested proves that additional light upon the subject is greatly to be desired. With the intention of awakening a sufficient interest in it to secure a more careful recording of such cases as may arise, together with the methods and results of their treatment, the following histories are presented:

Edward Smith, aged twenty-nine, of robust appearance, had always enjoyed good health. On February 10, 1883, two months after admission to the Workhouse, applied at the dispensary, complaining of chilliness, general muscular soreness, and pain in the bones. There was slight soreness of the throat, and pain in deglutition, which he stated he had first felt upon the right side. The tonsils were congested and slightly enlarged, particularly the right.

February 11th, 12th.—Felt much worse and experienced more dysphagia. He also complained of a feeling of dryness in the nasal passages and inability to breathe through the nose. Described the nasal condition as being like a "cold in the head." The pulse was somewhat accelerated, and there was a slight rise of temperature.

14th.—Was transferred to the hospital, all of the above symptoms being exaggerated. Temperature 102°, pulse 96, respirations 27. Tongue and teeth covered with sordes; tonsils and pharynx deeply congested. At this time also an herpetic eruption appeared on the face, below and to the outer side of the angle of the mouth.

15th.—On the morning of this day an erysipelatous redness, attended with swelling, appeared upon the upper lip, adjoining the alæ of the nose, and fading off upon the cheeks. There was also severe pain in the back of the head and the neck. The appetite was good, and there was little malaise. The temperature, however, was 104°, pulse 96, respirations 24.

17th.—The swelling and redness had extended to the margin of the hair, and had invaded the neck. The face was covered with blisters. The pulse was running and intermittent at 80, and the tongue black and dry. Severe pain still continued in the back of the neck.

18th.—Did not appear to suffer much pain. Erysipelas not extending.

19th.—Patient fell into a semi-conscious condition, from which it was impossible to arouse him, and questions put to him met with no response.

21st.—Semi-consciousness continued, but the patient began to be very restless and delirious. His hands were kept in constant motion, and it was almost impossible to keep him in bed. The facial swelling had subsided, and exfoliation of the epidermis had begun. The tongue was still black and thickly coated. The pulse and temperature were normal.

22d.—Patient was more rational and able to answer questions.

23d.—Was again slightly delirious, constantly sitting up in bed and throwing off the bedclothes, and fighting any one who came near him. Temperature 97°, pulse 50, respirations 21.

24th.—The delirium became active and of an hilarious character, the patient singing, shouting, and constantly arranging the bedclothes, and imitating the actions of the ward attendants. The condition of the tongue had cleared somewhat, and the appetite had returned.

26th.—Patient was slightly irrational. Tongue clean; exfoliation of epidermis of face, neck, and ears progressing. Temperature and pulse normal.

March 3d.—Delirium entirely gone. Exfoliation almost complete. Hair began to fall out. During the whole illness there was obstinate constipation.

12th.—Patient was discharged, apparently cured.

On the morning of March 16th, however, the attention of the house surgeon was called to Smith on account of his wild appearance and strange actions. He was wandering aimlessly about the corridors, and seemed sullen and morose. This continued until the morning of the 18th, when he was transferred to the hospital again. He would pay no attention to those about him, answered questions a long while after they were put to him, imagined that his fellow-workmen were trying to annoy him, and that every one was plotting against him. While in the hospital

he had delusions of a religious character at times, and at other times he imagined that some one whom he did not know was constantly urging him to the performance of a variety of strange actions, and he believed that he must obey. He was treacherous, and would strike at the attendant whenever a good opportunity presented. His nights were restless and sleepless, and the constant hallucination of an outside impelling influence kept him busily engaged, while he would hide under the bed, fix himself in various grotesque positions, arrange the bedclothes, and at times sit and stare at some one object for half an hour. If given something to do, he did it well, and while busy was happier and more satisfied to stay in the ward, but, when unemployed during the day, would constantly walk up and down, watching an opportunity to escape. During the five days he remained in the hospital he had no rise of temperature, his pulse was somewhat accelerated and weak, and his appetite good. As soon as his transfer could be effected, he was sent to the Insane Asylum at Ward's Island, where, when last heard from, he still remained.

The following case occurred in the wards of the New York Almshouse Hospital during the service of the writer in the spring of 1882. Unfortunately, careful notes were not taken at the time, and it will, therefore, be possible to report only as much as can be given from memory. The patient was an aged pauper of about seventy years, large, somewhat stout, and decidedly rheumatic. She was attacked with what at first seemed an acute laryngitis. The disease, however, spread rapidly in both directions, involving both the lungs and the pharynx, producing in the former distinct and widespread broncho-pneumonia, and in the latter an intense congestion. The mucous membrane here was also œdematous, and of a dark, purplish color. So peculiar was its appearance, and so threatening the extent of the œdema, that a laryngoscopic examination was made to ascertain the probable necessity for tracheotomy. Although in a state of general tumefaction and of the same dark color as the pharynx, there was an ample rima glottidis, but marked hoarseness of the voice. The constitutional symptoms were slight, considering the nature and severity of the attack. By degrees the inflammation extended from the pharynx to the lips, whence, apparently having received a fresh impetus, it spread over the face. Meanwhile, the coexistence of diarrhœa, mild delirium, and continued high temperature rendered the general condition grave. This period marked the height of the attack. The lungs were first to improve, and the disappearance of the pneumonia was followed by a subsidence of the laryngeal and pharyngeal inflammation and a marked improvement in general. Strange to say, as desquamation occurred in the face and neck, the erysipelas extended, by slow degrees, over the whole body, the march being slow, the general symptoms mild, and no great extent of surface being involved at any one time. At the end of several weeks this process was completed by involvement and subsequent desquamation of the legs and feet. The patient recovered.

The case first related would, if classified according to the method of Cornil, belong to division number two, since it was decidedly severe in its nature, and the presence of phlyctænulæ, although not mentioned in the history by my house surgeon, was distinctly observed by myself. The features of the case which especially distinguish it are, first, the occurrence of the disease idiopathically in a patient who, so far as could be learned, had not been exposed to any erysipelatous infection; secondly, the distinct limitation of the disease to the tonsil for a period of three days; and, thirdly, the marked cerebral disturbance and subsequent insanity.

No especial cause of irritation was apparent in the tonsil; the man had been to all appearances unusually strong and healthy, and the sanitary condition of the premises was at the time tolerably good. The limitation of the inflammation and its absolutely benign appearance at the beginning of the attack were sufficient to disarm suspicion as to its true nature, and entirely out of harmony with the subsequent severity of the symptoms. By far the gravest of these was the effect of the disease upon the brain. So far as could be ascertained, the patient had never before manifested any sign of mental aberration. His insanity, therefore, bore such a distinct relation to the attack that, beyond question, the one was intimately associated with the other. Of course, it is by no means unusual for facial erysipelas of the ordinary type to be complicated with delirium and coma, and even with the more serious cerebral symptoms indicating meningitis, so that it is not surprising to find it developed by the form under special consideration. The mechanism of this metastasis, however, is a matter of much interest. Formerly, it was explained as being a localized manifestation of a general morbid condition. At present, believers in the germ theory will maintain that it is due to an incursion of the bacillus of erysipelas from the frontier regions to the interior. Before accepting the foregoing it seems but just to call attention to the possibility of *direct extension* of the disease from the deeper layers of the olfactory region, and through the cribriform plate of the ethmoid bone, to the meninges; or, as is still more likely, from the surface of the face in the vicinity of the nose, forehead, and eyelids, through the anastomosis of the angular branch of the facial and other superficial facial vessels with the ophthalmic vein.*

As has been long ago pointed out by Mr. Spencer Watson, of London, and others, in cases of severe inflammation of the nasal

* Quain's "Elements of Anatomy," eighth edition, London, 1878, vol. i, p. 484.

cavities an important point from the clinical aspect is that the intracranial symptoms come on very insidiously, and that the nasal disease is often quite overlooked, so that the appearance of meningitis seems inexplicable, or is attributed to some other cause. Mr. Frank Ogston reports a case ("British Medical Journal," May 16, 1885) in which the post-mortem examination showed that the exciting cause was an inflammation of the nasal mucous membrane which had spread through the orbital plate of the ethmoid bone and the dura mater to the arachnoid membrane, which it had attacked, and the inflammation had spread along the subarachnoid space.

Careful examination of the dura mater showed that it was healthy except a small patch which covered the orbit, which was thickened, roughened on the side toward the bone, and covered with a layer of lymph on the side next the brain, by which it was glued to the arachnoid. The orbital plate of the right side presented a canary-yellow appearance and a congested and roughened state of the bone. On cutting through this, the nasal cavity was found to be filled with a thick, creamy pus, which welled out into the brain cavity. Dr. McNaught, in a succeeding number of the same journal, reports two similar cases, both of which were attended with fatal results. There were no autopsies. In both cases a very profuse discharge of fœtid pus took place suddenly from both nostrils. Although there was nothing especial pointing to the frontal sinuses in these cases, Dr. McNaught thought that there would be little doubt that the meningitis had been set up by continuity from inflammation of the mucous membrane lining these cavities.*

While it is extremely improbable that in ordinary conditions of chronic inflammation the disease should thus extend itself, still it is by no means difficult to believe that a violent phlegmonous lesion of the deeper structures of the olfactory region might communicate itself to the neighboring highly vascular structures of the brain cavity. Still more reasonable is it to suppose that an erysipelas, involving the integument of the nose, forehead, and eyelid, should be conveyed to the brain-cavity by the way of the ophthalmic vein. The influence of inflammatory conditions of the middle ear and of the frontal sinus in exciting cerebral complications is well attested.

By whatever process it may have occurred in the case under consideration, there was established, without doubt, a meningitis, at first acute. Subsequently the acute attack passed into the chronic

* "Report on Laryngology," Dr. F. H. Hooper, "Boston Med. and Surg. Jour.," August 20, 1885.

form, presenting the symptoms of this condition typically described toward the end of the history.

Case number 2 is more after the usual course of the disease. The patient was old, feeble, and lithiatic. She was housed in a crowded, ill-ventilated hospital ward, in which, although there may not actually have been another case then, erysipelas was never, for any great length of time, absent.

That the original seat of the disease was the larynx is plain, while its extension to the lungs on the one hand, and to the pharynx and the general surface on the other, renders the case one of rare and peculiar interest.

In an article published in the "Rivista Clinica e Terapeutica," No. 1, 1885, Dr. F. Massei, of Naples, endeavors to prove, from a study of thirteen cases, that the so-called primary œdema of the larynx, or phlegmonous laryngitis, corresponds clinically to a localization of erysipelas in the larynx. He describes the objective symptom of the disease as being a marked swelling, which, beginning at the epiglottis, extends to the mucous membrane of the arytæno-epiglottic ligament and the inter-arytænoid space, causing dyspnœa, dysphagia, and aphonia. The onset is generally sudden, and the laryngoscope shows such intense swelling that the interior of the larynx can not be demonstrated. Blood and pus are occasionally poured forth from spontaneous rupture of the mucous membrane. Often the swelling migrates, decreasing on one side and increasing on the other. The prognosis is, either recovery or else death by asphyxia or pneumonia.

Massei considers the disease erysipelatous for the following reasons:

1. Its rapid development and its tendency to wander, as well as its predilection for parts in which the lymphatics are abundant.

2. The constitutional symptoms, which resemble those of erysipelas.

3. Its want of resemblance, from its migratory character, to the ordinary forms of laryngitis.

4. The tendency of the disease to extend to the lungs; and, finally, its occurrence during the course of epidemics of erysipelas.

He concludes:

1. There is a primary erysipelas of the larynx.

2. Many cases reported as primary œdema of the larynx are really cases of erysipelas; this occurs more commonly than is generally supposed.

3. There are two forms: in the first the local manifestations precede the general; in the second they close the scene.

4. The best methods of treatment are applications of cold, scarification, and, finally, if asphyxia threatens, tracheotomy.

It will be seen that Massei's observations relate solely to the larynx. Although somewhat general in their nature, they are given as supplementing the views of the writers quoted above.

As to treatment, this of course must be both local and constitutional. Morell Mackenzie has had beneficial results in two cases of pharyngeal erysipelas from the insufflation twice daily of morphia, one quarter grain, diluted with starch, while ice was constantly sucked and bromide of potassium given every four hours. He believes that hot soothing inhalations should not be used so long as there is any chance of arresting the inflammation. Should gangrene supervene, antiseptic gargles must be employed. Iron, and, if necessary, quinine, ammonia, and stimulants should be administered, and a most nutritious diet insisted upon, while the danger of asphyxia must be borne constantly in mind.

By a careful study of the special conditions and necessities of individual cases, and by the prompt application of such measures as shall meet the given indications, much may be done, without doubt, to relieve the patient and hasten recovery.

It is hoped that the discussion of this paper may elicit minor suggestions more definite and more useful than any we have been able to give. In general, it may be said that in local treatment the effect upon the patient of such drugs as morphia, etc., must be carefully remembered. The use of the spray apparatus, as contrasted with the older methods for making applications, promises well for additional comfort and success.

The writer is certain that, as house surgeon ten years ago in a large public hospital in which the erysipelas pavilions formed an important part of the service, both laryngeal and pharyngeal cases were occasionally presented. Unfortunately, their real nature was not then recognized, and in the lapse of time which has since occurred the recollection of the facts connected with them has become too indistinct to enable him to refer to them with any confidence or accuracy.

Discussion.

Dr. De Blois said: My case, to which the reader has just referred, closely simulated follicular tonsillitis, and I treated it as such for twenty-four hours. The pharynx was involved in the inflammatory process, and

both tonsils were equally affected. On the next day it appeared to have extended to the nasal cavities. There was a discharge from the nose, and what was much like a diphtheritic membrane in the posterior nasal cavities. There was no appearance on the face of any skin affection. There was some malaise, but the patient did not have a higher temperature than would be usual in the course of a severe tonsillitis. On the fourth day, when the disease passed on to the nasal cavities, the inflammation of the tonsils was somewhat improved. Later erysipelatous redness appeared over the bridge of the nose. The internal manifestations meanwhile became somewhat better, and the case progressed to a very severe attack of facial erysipelas. She subsequently recovered. The point which I wished to bring out was, the difficulty of diagnosis.

Dr. Rice.—It would seem strange that erysipelas of the larynx and pharynx should be such an infrequent disease when the conditions are so favorable to its development. Cases of facial erysipelas are very common when at the same time the patient is suffering with extensive ulcerations of the nose and pharynx, which, we should suppose, would invite an extension of the disease to this locality. And yet this is a rare occurrence. Ulcerations on the cutaneous surface are almost always attacked; on the mucous membrane it is the exception. I am convinced that erysipelas of the larynx does exist where a diagnosis is not made. I remember in the erysipelas wards of Charity Hospital there were two cases (which were called "œdema glottidis") where tracheotomy was done; the inflammation here was probably of an erysipelatous nature.

Dr. Roe.—An interesting case of erysipelas of the larynx and pharynx came under my observation about a year and a half ago, in a lady, about thirty-seven years of age, of a nervous sanguine temperament. She was under treatment for naso-pharyngeal catarrh. The attack seemed to be due to exposure during a slight fall of snow, in the course of which she rubbed her face with snow. Within six hours afterward she had well-marked facial erysipelas. This went on its usual course, but soon assumed a severe type. Within thirty-six hours afterward she had delirium. The erysipelas extended to the neck and into the pharynx, also into the larynx, causing marked œdema of the larynx and pharynx, so that there was severe dyspnœa for about twenty-four hours. One night I remained in the house expecting to have to perform tracheotomy before morning. I used the usual course for erysipelas—*i. e.*, mild alkaline sprays, with a little alcohol—which seemed to have a very quieting and soothing effect, and soon the erysipelas began to subside in the face and gradually in the larynx and pharynx. In about four days the symptoms in that region disappeared. These cases must be unusual, as Dr. Delavan has said, although often attributed, probably, to other causes.

Dr. Cohen.—Having seen the admirable effects of the hypodermic injection of hydrochlorate of pilocarpine in facial erysipelas in hospital practice, it occurs to me that it would be an admirable method of treat-

ing these rare cases. Its action in doses of one sixth of a grain is very prompt.

Dr. DELAVAN, in closing the discussion, said: There seems to be no reason why any inflammatory condition of the pharynx—such as diphtheria, follicular tonsillitis, or peritonsillar abscess—should not excite an attack of erysipelas, so that a case beginning as a simple attack of one of the former affections may result in the latter. With regard to the use of pilocarpine, I have found the dose recommended to be, in some cases, excessive, and would urge the employment of this potent drug in smaller quantities, one twentieth of a grain often being sufficient.

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